General

Guideline Title

Stem cell transplantation in lymphoma.

Bibliographic Source(s)

Kouroukis CT, Rumble RB, Kuruvilla J, Crump M, Herst J, Hamm C. Stem cell transplantation in lymphoma. Toronto (ON): Cancer Care Ontario; 2012 Dec 13. 23 p. (Recommendation report; no. SCT-4). [28 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Imrie K, Rumble RB, Crump M, Advisory Panel on Bone Marrow and Stem Cell Transplantation, Hematology Disease Site Group. Stem cell transplantation in adults: recommendations. Toronto (ON): Cancer Care Ontario Program in Evidence-based Care; 2009 Jan 30. 78 p. (Recommendation report; no. 1).

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Recommendations

Major Recommendations

Hodgkin's Lymphoma (HL)

- Stem cell transplantation is not recommended as part of routine primary therapy for HL. Standard treatment for HL remains chemotherapy with or without radiation.
- Autologous stem cell transplantation (ASCT) is the recommended treatment option for chemo-sensitive patients with HL who are refractory to or who have relapsed after primary chemotherapy. Patients with stable disease following salvage chemotherapy could also remain eligible for autologous stem cell transplantation. Patients with progressive disease despite salvage chemotherapy should not be offered autologous stem cell transplantation outside the context of a clinical trial.
- Allogeneic stem cell transplantation is an option for chemo-sensitive patients with refractory or relapsed HL if they have a syngeneic (identical twin) donor, following autologous stem cell transplantation failure, or alternatively in patients in whom sufficient numbers of autologous stem cells cannot be collected.

Non-Hodgkin's Lymphomas (NHL)

Aggressive Histology NHL Including Diffuse Large B-Cell Lymphoma, Transformed Lymphoma and Aggressive Histology T-Cell Lymphomas (AH-NHL)

- Autologous stem cell transplantation is the recommended option for chemo-sensitive patients with AH-NHL refractory to or relapsed after primary therapy.
- Allogeneic stem cell transplantation is an option for chemo-sensitive patients with refractory or relapsed NHL if they have a syngeneic (identical twin) donor, following autologous stem cell transplantation failure, or alternatively in patients in whom sufficient numbers of autologous stem cells cannot be collected.
- Stem cell transplantation is not recommended for patients with AH-NHL as part of primary therapy.

Follicular Lymphoma (FL)

- Autologous or allogeneic transplantation are options for chemo-sensitive patients with poor prognosis FL refractory to or relapsed after primary therapy.

Burkitt's Lymphoma

- Autologous and allogeneic transplantation are options for chemo-sensitive patients with Burkitt's lymphoma refractory to or relapsed after primary treatment.

Mantle Cell Lymphoma (MCL)

- Autologous stem cell transplantation is recommended for patients with MCL in first remission.
- Select patients with MCL in first or second remission may be considered for allogeneic transplant. Autologous transplantation is also an option for chemo-sensitive patients with MCL in second remission.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Lymphomas that may require stem cell transplantation, including:

- Hodgkin's lymphoma (HL)
- Non-Hodgkin's lymphomas
    - Aggressive histology non-Hodgkin's lymphoma (NHL) including diffuse large B-cell lymphoma, transformed lymphoma, and aggressive histology T-cell lymphomas (AH-NHL)
    - Follicular lymphoma (FL)
    - Burkitt's lymphoma
    - Mantle cell lymphoma (MCL)

Guideline Category

Assessment of Therapeutic Effectiveness

Evaluation

Management

Treatment

Clinical Specialty

Hematology

Oncology

Intended Users

Physicians

Guideline Objective(s)

- To evaluate the role of stem cell transplantation in the treatment of the various lymphomas
- To review the most-current evidence comparing treatment modalities that include a stem cell transplantation component, and to make a series of clinical recommendations to inform clinicians, patients and other stakeholders of the treatment options available
- To update the 2009 Stem Cell Transplantation in Adults report

Target Population

All adult patients with lymphoma who are being considered for treatment that includes either bone marrow or stem cell transplantation

Interventions and Practices Considered

1. Allogeneic stem cell transplantation
2. Autologous stem cell transplantation

Major Outcomes Considered

- Survival (overall, progression-free, event-free)
- Neutrophil engraftment
- Graft-versus-host disease
- Treatment-related mortality

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

This Recommendation Report was created to update the 2009 Stem Cell Transplantation in Adults report. Using the Recommendations in that report as a starting point, evidence published from the original report's literature search dates to current was performed to gather the most evidence.

Literature Search Strategy

The MEDLINE (OVID) database (2006 through February [week three] 2011) was systematically searched for evidence on March 1, 2011 using the strategy that appears in Appendix A in the original guideline document. A total of 634 hits were obtained, and after excluding irrelevant papers according to a title and abstract review, 30 were ordered for full-text review. Of these 30 ordered for full-text review, 14 met the inclusion criteria

and were retained.

Study Selection Criteria

Inclusion Criteria

Articles were selected based on the following criteria:

1. Systematic reviews with or without meta-analysis or clinical practice guidelines if evidence was obtained with systematic review.
2. Fully published randomized controlled trials (RCTs) on patients with lymphoma that received stem cell transplantation (SCT) and reported on survival and/or quality of life (QoL).
3. Fully published non-randomized studies on patients with lymphoma that received SCT and had an appropriate contemporaneous control group that reported on survival or QoL.
4. Reports published in English only.

Number of Source Documents

Of the 30 papers ordered for full-text review, 14 met the inclusion criteria and were retained.

Methods Used to Assess the Quality and Strength of the Evidence

Expert Consensus (Committee)

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Synthesizing the Evidence

No pooling was planned for this report but would be considered if data allow.

Assessment of Study Quality

The quality of the included evidence was assessed as follows: For systematic reviews that would be used as the evidence base for the recommendations, the measurement tool to assess systematic reviews (AMSTAR) tool was used to assess quality. For clinical practice guidelines, the Appraisal of Guidelines for Research and Evaluation (AGREE) 2 instrument was used, but only if adaptation of the recommendations was being considered. Any meta-analysis was assessed for quality using similar criteria as used for randomized controlled trials (RCTs), where appropriate. RCTs were assessed for quality by examining the following seven criteria: the method of randomization, reporting of blinding, the power and sample size calculation, length of follow-up, reporting details of the statistical analysis, reporting on withdrawals to treatment and other losses to follow-up, and reporting on the sources of funding for the research. Comparative, but non-randomized, evidence was assessed according to full reporting of the patient selection criteria, the interventions each patient received and of all relevant outcomes.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Peer Review

Description of Method of Guideline Validation

Not stated

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

Most of the recommendations were brought forward from the 2009 Recommendations Report (Stem cell transplantation in adults). New evidence in this report included randomized trials, prospective cohort studies, retrospective cohort studies, systematic reviews with or without meta-analysis, and clinical practice guidelines.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Improved overall survival, progression-free survival, and event-free survival

Potential Harms

Stem cell transplantation is associated with toxicity including graft-versus-host disease (GVHD) and treatment-related mortality.

Qualifying Statements

Qualifying Statements

- The patient selection process and the ultimate decision to perform a stem cell transplant should take into account not only disease-related characteristics, but also co-morbidities and patient preferences.
- Care has been taken in the preparation of the information contained in this report. Nonetheless, any person seeking to apply or consult the report is expected to use independent medical judgment in the context of individual clinical circumstances or seek out the supervision of a

qualified clinician. Cancer Care Ontario makes no representation or guarantees of any kind whatsoever regarding the report content or use or application and disclaims any responsibility for its application or use in any way.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2009 Jan (revised 2012 Dec 13)

Guideline Developer(s)

Program in Evidence-based Care - State/Local Government Agency [Non-U.S.]

Guideline Developer Comment

The Program in Evidence-based Care (PEBC) is a Province of Ontario initiative sponsored by Cancer Care Ontario and the Ontario Ministry of Health and Long-Term Care.

Source(s) of Funding

The Program in Evidence-Based Care (PEBC) is supported by Cancer Care Ontario (CCO) and the Ontario Ministry of Health and Long-Term Care. All work produced by the PEBC is editorially independent from its funding agencies.

Guideline Committee

Stem Cell Transplant Steering Committee

Composition of Group That Authored the Guideline

Primary Authors: Dr. C. Tom Kouroukis, Mr. R. Bryan Rumble, Dr. John Kuruvilla, Dr. Michael Crump, Dr. Jordan Herst, and Dr. Caroline Hamm

Financial Disclosures/Conflicts of Interest

The authors reported on potential conflicts of interest relating to the topic, and none were declared.

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Guideline Availability

Electronic copies: Available from the Cancer Care Ontario Web site.

Availability of Companion Documents

The following is available:

- Program in evidence-based care handbook. Toronto (ON): Cancer Care Ontario (CCO); 2011. 15 p. Available in Portable Document Format (PDF) from the Cancer Care Ontario Web site.

Patient Resources

None available

NGC Status

This summary was completed by ECRI Institute on February 12, 2010. This summary was updated by ECRI Institute on April 23, 2013.

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